PCN104 USE OF PSA SLOPE TO GUIDE ADJUVANT RADIOThERAPY IN POST-
PROSTATECTOMY PROSTATE CANCER HAS POTENTIAL TO BE COST EFFECTIVE
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OBJECTIVES: Nadia ProView is a prognostic system developed to identify men at lower risk for clinical recurrence of prostate cancer following radical prostatec-
tomy, as indicated by a prostate-specific antigen (PSA) slope <~2 pg/mL/month.
We evaluated the potential cost-effectiveness of using the prognostic system to guide adjuvant radiotherapy (ART) in men considered to be at intermediate- or high-risk for recurrence on the CAPRA-S nomogram.

Methods: We developed a decision analytic model consisting of a decision tree to stratify men into risk groups and a state transition model to generate long-term costs and outcomes. We divided men into five risk groups using patient-level data from the study’s 51066 registration study, the medical literature and other sources. We conducted probabil-
istic, one-way and two-way sensitivity analyses to examine the cost-effectiveness of the different ART strategies (ART, no ART) for each of the five risk groups. The model was run for 10000 cohorts of 1000 men, with PSA slope findings.

RESULTS: The cost-effectiveness of a PSA slope-guided strategy varied widely due to small differences in QALYs at 10 years. Assuming that 20% of men in the intermediate-risk CAPRA-S group receive ART with standard care, the incremental cost-effectiveness ratio (ICER) is less than $50,000 per QALY when use of ART is less than 8.2% among men with PSA slopes <~2 pg/mL/month. Assuming that 40% in the high-risk CAPRA-S group receive ART with standard care, ART would have to decrease to at least 11.5% among men with PSA slopes <~2 pg/mL/month, to achieve an ICER less than $50,000 per QALY. ICERS were also sensitive to varying the costs of the prognostic system and ART, varying the benefits of salvage therapy and utility weights for ART toxicities. CONCLUSIONS: The ProView system has the potential to be cost-effective, as the model was not able to identify the magnitude of reduction in ART among men identified as having a low risk of recurrence.

PCN105 COST-EFFECTIVENESS OF CETUXIMAB AS FIRST-LINE TREATMENT FOR METASTATIC COLORECTAL CANCER IN THE UNITED STATES
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OBJECTIVES: To evaluate the clinical and economic tradeoffs associated with FOLFOX versus FOLFIRI for first-line or bevacizumab-containing regimens that will type (WT) metastatic colorectal cancer (mCRC) patients, through a cost-effective-
ness analysis incorporating Phase III FIRE3 clinical trial data. METHODS: A deter-
minal state model was developed to project life expectancy and costs of FOLFIRI used with either cetuximab or bevacizumab. An ART cohort of 1st-line patients faced risks of adverse events, progression to 2nd-line treatment, or eligibility for curative liver resection. Clinical trial data, published literature, and publicly avail-
able databases were used to estimate model inputs. Incremental cost-effectiveness ratios (ICERs) were calculated as 2013 US$ per life year (LY) and per quality-adjusted life year (QALY). We conducted a scenario analysis to analyze the subset of RAS WT patients. The impact of parameter uncertainty was also evaluated with one-way and probabilistic sensitivity analyses. RESULTS: Compared with 1st-line bevacizumab KRAS WT patients, those treated with cetuximab gained an additional 5.7 months of life (42.9 vs. 37.2) at the cost of $46,301 ($280,933 vs. $224,632), for an ICER of $97,297/LY ($1,227,704/QALY). The benefits of cetuximab were also greater for RAS WT patients for whom the ICER was $77,380/LY ($99,636/QALY). Treatment with cetuximab would be cost effective 53.6% of the time, given a willingness to pay threshold of $100,000/ LY. Results were most sensitive to changes in 1st-line survival, treatment duration, and patient acquisition costs. CONCLUSIONS: Treatment with cetuximab + FOLFIRI in 1st-line mCRC patients may improve health outcomes and use financial resources more efficiently than bevacizumab + FOLFIRI, given current societal standards. This information can be useful to clinicians, payers, and policy makers in making treat-
ment and resource allocation decisions for KRAS WT and RAS WT mCRC patients.

PCN106 COST-EFFECTIVENESS OF PROPHYLACTIC USE OF FURGITRASIL IN ADULTS WITH ACUTE LEUKEMIA Lymphoblastic COLOMBIA
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OBJECTIVES: To determine the cost-effectiveness of prophylactic administration of Fligristim compared with no use, during the induction phase of chemother-
apy in adults with Acute Lymphoblastic Leukemia (ALL) in the Colombian con-
text.

METHODS: A decision tree with a time horizon of 30 days is built under the third-party payer perspective including only direct costs. The costs of procedures and medications were taken from official sources and an institution of national registry and specialties. Using the literature and two Colombian cohorts (one retrospective and one prospective) with patients older than 15 years. The unit of outcome was the proportion of deaths averted. The incremental cost-effectiveness ratio (ICER) was calculated, univari-
ate and multivariate analyses were performed. Costs were calculated in US dollars. Results indicate that under the scenario of a clinical trial not using factor was a dominated alternative (ICER of $61,753,681 COP per death averted). In contrast, using data from the clinical trial and bevacizumab was dominated strategy (ICER of ~141,602 COP for retrospective cohort and prospective cohort – $215,449,438 COP). The variable that most impacted the outcome was the incidence of febrile neutropenia (12% for the clinical trial, 60% retrospective cohort and 83% prospective cohort). The results were robust for the multivariate sensitivity analysis. With the data from the clinical trial in 94% of cases using factor was cost effective, while in the Colombian data in 84% and 72% of cases (retrospective and prospective cohort respectively) was not cost effective using factor. CONCLUSIONS: With Colombian information, prophyl-
tactic use of the factor under chemotherapeutic induction in adults with ALL turns out to be not cost-effective. The gap in the results suggests a careful extrapolation of information from clinical trials (ideal world) to develop economic evaluations in Colombia, and its impact on decision making.

PCN107 COST-EFFECTIVENESS OF FULL-FIELD DIGITAL MAMMOGRAPHY VERSUS SCREEN-FILM MAMMOGRAPHY IN BREAST CANCER SCREENING
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OBJECTIVES: Analyze the cost-effectiveness of full-field digital mammography (DM) compared to the screen-film mammography (SMF) among different age groups of Mexican women. METHODS: A cost-effectiveness study was developed - from the public sector perspective - per cancer detected by DM vs. SMF in the following age groups: 40-49, 50-59 and 60-69 years old. Additional costs and effects were estimated by comparing DM against SMF and expressed as incremental cost-
effectiveness ratio (ICER). This study was the first to perform a cost-effectiveness ratio in 94% of cases using factor was cost effective, while in the Colombian data in 84% and 72% of cases (retrospective and prospective cohort respectively) was not cost effective using factor. CONCLUSIONS: With Colombian information, prophyl-
tactic use of the factor under chemotherapeutic induction in adults with ALL turns out to be not cost-effective. The gap in the results suggests a careful extrapolation of information from clinical trials (ideal world) to develop economic evaluations in Colombia, and its impact on decision making.

PCN108 PARAMETER VALUES ASSOCIATED WITH THE DEVELOPMENT OF THE COMPANION DIAGNOSTICS IN ADVANCED/ METASTATIC CANCER TREATMENT
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OBJECTIVES: Many targeted and other drugs under development will be used with a companion diagnostic. The objective of this study was to define parameter values that will be included in a global model estimating the cost-effectiveness of a companion diagnostic. The model was developed to improve the ability to predict whether a new treatment will be generic to allow its use in the most common cancers in Canada (breast, prostate, lung, colorectal, bladder, cervical, non-Hodgkin’s lymphoma), specific parameters for each cancer of interest (including health state utilities and costs associated with cancer treatment) were constructed. Cross-sectional studies and governmental publications were also consulted. Canadian costs and utilities associated with any grade 3-4 treatment-related adverse events (AEs) were also obtained. RESULTS: Lung cancer was associated with the highest inpatient cost ($52819.87/Stay of 9.9 days on average), while patients with prostate cancer incurred the highest cost associated with emergency visits ($50271.55/Case). Costs associated with end-of-life care were similar among cancer types, with an average cost of $50018.01/case and 152 days of end-of-life care. Thirty-nine AEs were retrieved. Costs associated with management of AEs were up to $5271,967/case (development of secondary malignancy) with an average cost of $5,717,917/ event. Disutilities associated with the incidence of AEs were up to 0.465 (hip fracture), with an average utility loss of 0.135. Lung cancer presented the worst health state utility values (0.611 in pre-progression and 0.441 in progression). CONCLUSIONS: Although the model structure and key elements required to assess the cost-effec-
tiveness of a companion diagnostic can be generalized to different cancer types, this study suggests that parameter values should be specific to the cancer of interest.

PCN109 CAN NEXT GENERATION SEQUENCING SAVE LIVES AND PROVIDE A GOOD ECONOMIC VALUE IN COLORECTAL CANCER PREVENTION
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OBJECTIVES: Screening of all patients diagnosed with colorectal cancer for Lynch syndrome using a staged testing procedure is currently recommended by Evaluation of Genomic Applications in Practice and Prevention (EGAPP). However, the next generation sequencing (NGS) is a disruptive technology that likely offers improved outcomes, but its value is uncertain. The goal of this study was to evaluate the cost-effectiveness of NGS tumor tissue testing for universal testing of patients with colorectal cancer (CRC) to detect relatives with Lynch syndrome.

METHODS: